

# Money, Politics, and a Future for the International Financial System

*Michael Klein*

Three approaches to regulatory frameworks for financial systems — and a scenario for development of the world financial system that assumes a market solution.



## Summary findings

In developing the architecture for a financial system, the challenge is to combine deregulation and safety nets against systemic failure with effective prudential regulation and oversight.

Klein analyzes three approaches to choosing an adequate regulatory framework for a financial system.

- Those most worried about panic and herd behavior tend to favor relatively extensive controls on financial institutions' activities, including controls on interest rates and on the volume and direction of lending.
- Those most concerned about moral hazard advocate abolishing controls and safety nets, seeing the solution in stronger market discipline and reduced powers and discretion for regulators.
- Mainstream opinion advocates a mix of measures, to both strengthen market discipline and improve regulatory oversight.

The approach a country opts for depends on (1) which monetary and exchange rate regime it chooses, (2) whether it is more concerned about moral hazard or about panic and herd behavior, and (3) how the politics of reform shape its solutions.

Klein suggests a scenario for development of the global financial system over the next two or three decades that

assumes that the final outcome will resemble the market solution — not because that is the optimal policy choice but because of how political weaknesses will interact with advances in settlement technology.

In Klein's scenario, the world moves toward a monetary system in which fixed exchange rate systems or de facto currency competition limit the power of central banks. This limits options for discretionary and open-ended liquidity support to help deal with systemic financial crises.

The costs of inflexible exchange rates are moderated by new types of wage contracts, using units of account that are correlated with the shocks a particular industry or kind of contract faces — thus maintaining the positive aspects of monetary systems with flexible nominal exchange rates.

Mistrust in monetary authorities and the emergence of private settlement systems lead to a return of asset-backed money as the means of payment.

The disciplines on financial systems come to resemble somewhat those of historical "free banking" systems, with financial institutions requiring high levels of equity and payments systems protected only by limited, fully funded safety nets.

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# **MONEY, POLITICS AND A FUTURE FOR THE INTERNATIONAL FINANCIAL SYSTEM**

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Arguably the key challenge for financial system architecture is to combine deregulation as well as safety nets against systemic failure with effective prudential regulation and oversight of actors in financial systems. Possible approaches depend in turn on the choice of monetary and exchange rate regime, in which financial systems are embedded. This paper sets out three approaches to deal with key dilemmas facing policy-makers in choosing an adequate regulatory framework and creates a scenario for the development of the global financial system over the next two or three decades, which assumes that the actual outcome will resemble the market solution.

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## SUMMARY FINDINGS

Arguably the key challenge for financial system architecture is to combine deregulation as well as safety nets against systemic failure with effective prudential regulation and oversight of actors in financial systems. Possible approaches depend in turn on the choice of monetary and exchange rate regime, in which financial systems are embedded.

The first part of this paper sets out three approaches to deal with key dilemmas facing policy-makers in choosing an adequate regulatory framework. Those most worried about herd behaviour and panic tend to favour relatively extensive controls on the activities of financial institutions, including on interest rates and on the volume and direction of lending. Those most concerned about moral hazard advocate the abolition of controls and safety nets. They see the solution in stronger market discipline and reduced powers and discretion for regulators. The mainstream of opinion advocates a mix of measures that strengthens both market discipline and improves regulatory oversight. Which of these approaches will turn out to be adopted in the end remains uncertain, because it is neither clear whether concerns about moral hazard or about herd behaviour and panic are fundamentally more important, nor is it clear how the politics of reform will shape solutions.

The second part of the paper creates a scenario for the development of the global financial system over the next two or three decades, which assumes that the actual outcome will resemble the market solution. The final outcome is not the result of optimal policy choice but of the interaction of political weaknesses with advances in settlement technology. In the scenario the world moves towards a monetary system where fixed exchange rate systems or de facto currency competition limit the powers of central banks. This limits options for discretionary and open-ended liquidity support to help deal with systemic financial crises. The costs of inflexible exchange rates are moderated by new types of wage contracts using units of account that are correlated with the shocks facing a particular firm or industry thus maintaining the positive aspects of monetary systems with flexible nominal exchange rates. Mistrust in monetary authorities and the emergence of private settlement systems lead to a return of asset-backed money used as the means of payment. The disciplines on financial systems come to resemble a bit those of historical “free banking” systems with financial institutions requiring high levels of equity and payments systems protected only by limited, fully-funded safety nets.



# **“MONEY, POLITICS AND A FUTURE FOR THE INTERNATIONAL FINANCIAL SYSTEM”**

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# **“MONEY, POLITICS AND A FUTURE FOR THE INTERNATIONAL FINANCIAL SYSTEM”\***

## **INTRODUCTION**

Flexible financial markets appear to stimulate growth (Levine, Loayza and Beck, 1998). They help allocate existing resources to their most efficient uses. Most importantly they help fund competing experiments and innovations and ultimately select the most successful among them. World-wide there is now a trend towards deregulation and liberalisation of financial markets. However, deregulated financial markets can exhibit severe volatility and disrupt economic activity as exemplified by the recent emerging market crises originating in East Asia, partly as a result of herd behaviour and panic. Some of the policy innovations of the 20<sup>th</sup> century have been aimed at creating safety nets against systemic failure in financial systems such as deposit insurance and liquidity support. However, the safety nets themselves also unavoidably create incentives for excessive risk-taking (moral hazard). The key challenge for financial system management is thus to combine deregulation and safety nets against systemic failure with effective prudential regulation and oversight of actors in financial systems. Possible approaches depend in turn on the choice of monetary and exchange rate regime, in which financial systems are embedded. For example, fixed exchange rate systems such as currency boards limit the ability of the monetary authority to provide deposit insurance or liquidity support.

The first part of this essay sets out the key dilemmas facing policy-makers in choosing an adequate regulatory framework, within which financial markets can decentralise allocation decisions efficiently while containing systemic risks. Broadly, three approaches exist to deal with the dilemmas. Those most worried about herd behaviour and panic tend to favour relatively extensive controls on the activities of financial institutions, including on interest rates and on the volume and direction of lending. Those most concerned about moral hazard advocate the abolition of controls and safety nets. They see the solution in stronger market discipline and reduced powers and discretion for regulators. The mainstream of opinion advocates a mix of measures that strengthens both market discipline and improves regulatory oversight. Which of these approaches will turn out to be adopted in the end remains uncertain, because it is neither clear whether concerns about moral hazard or about herd behaviour and panic are fundamentally more important, nor is it clear how the politics of reform will shape solutions.

The second part of the essay creates a scenario for the development of the global financial system over the next two or three decades, which assumes that the actual outcome will resemble the market solution, where regulators exercise few powers and have very limited discretion. The final outcome is not the result of optimal policy choice but of the interaction of political weaknesses with advances in settlement technology.

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The scenario has three main drivers. One is the politics of international safety nets and corresponding regulatory systems. Nation states are assumed to shy away from rescuing other countries. Countries with ailing financial systems are in turn unwilling to allow effective cross-border supervision to contain moral hazard problems. Second, it is assumed that efforts to make central banks independent do not effectively insulate monetary authorities from political pressure in times of real crisis. As monetary authorities issuing fiat money fall prey to the temptation to use their powers to impose some level of inflation tax they face the third scenario driver i.e. the introduction of low cost electronic settlement technology world-wide. This gives even poor individuals with limited financial wealth a choice of capital flight and thus effectively renders monetary authorities small players in a large world market without the ability to impose inflation tax.

In the scenario the three drivers move the world towards a monetary system where fixed exchange rate systems provide commitment (an anchor) to price stability. This limits options for discretionary and open-ended liquidity support to help deal with systemic financial crises. The costs of inflexible exchange rates are moderated by new types of wage contracts using units of account that are correlated with the shocks facing a particular firm or industry thus maintaining the positive aspects of monetary systems with flexible nominal exchange rates. Effectively, national currencies are less and less used as the unit of account for many contracts. Mistrust in monetary authorities leads to a return of asset-backed money used as the means of payment. The disciplines on financial systems come to resemble a bit those of the Scottish free banking system of the 18<sup>th</sup> and early 19<sup>th</sup> century with financial institutions requiring high levels of equity and payments systems protected only by limited, fully-funded safety nets.

## **PART A: FINANCIAL SYSTEM ARCHITECTURE - THE DILEMMA OF THE ECONOMIC CONSTITUTION**

### **I. Financial system architecture – an economic constitution**

*Financial systems and the distribution of wealth.* In capitalism, the financial system is the functional equivalent of central planning. Financial decision-makers provide and withdraw capital. They decide what gets done and what does not. A good financial system allocates resources to the highest return activities and allocates risks to those best able to bear or manage them. Financial decision-makers are also key forces behind the distribution of wealth and misery. Some financial decision-makers are top managers in corporations. Some work in financial institutions and some in government. Some invest their own savings. Most invest those of other people.

The opportunities open to financial decision-makers and the risks they face are a function not only of the things that are physically possible, but importantly a function of the rules they operate under, the discretion they have and their power to change or evade the rules. Differing somewhat from society to society these rules prominently feature the system of property rights including bankruptcy rules, the balance of competition and regulation in the financial markets and the ultimate recourse to support by taxpayers or captive consumers in the event bad

investment are made. This latter point renders the rules governing product markets an integral part for understanding the functioning of the financial system.

***Financial system architecture – an economic constitution.*** The current debate about a “new global financial architecture” is, therefore, about rules affecting who wins and who loses in the future. The rules and regulations affect the two sides of financial transactions, the flow of information from borrower to lender, say about creditworthiness, and the flow of funds from lender to borrower. Disclosure rules are examples of the former; capital controls one of the latter. The institutions administering the rules and regulations are designed so as to combine a de facto desired mix of autonomy and accountability. Setting those rules and establishing the institutions is like writing the economic constitution of a country. Like with any constitution, there are the issues of how the new constitution is designed and of who supervises implementation raising in turn the age-old problem of who guards the guardians. Right from the start we know, therefore, that there is no tidy technocratic solution to developing new global financial infrastructure. There are no solutions, only re-solutions. The issue is how political forces will arrive at some compromise - by design or by default - that de facto yields the new architecture.

## **II. Changes in monetary and financial systems during the 20<sup>th</sup> century**

Given the immense implications for the distribution of wealth we might expect that new monetary and financial regimes are hard to design and agree upon. This might suggest little change of basic systems over time. However, major change has occurred throughout the 20<sup>th</sup> century.<sup>1</sup>

***Domestic monetary and financial systems.*** Following early developments in the 19<sup>th</sup> century, the 20<sup>th</sup> century saw the rise of the state-owned central bank as monopoly issuer of domestic currency throughout the world. Currency backing by assets with a market value such as gold or silver was abandoned in favour of fiat money with nothing but the credibility of the central bank behind it. Systems of lender of last resort and deposit insurance were introduced around the globe, notably following the Great Depression of the 1930s. Safety nets backed by fiat money issuing central banks became the underpinning of banking systems everywhere. Bank regulation systems came into being to help protect depositors and control exploitation of the safety net by banks and investors.

***Exchange rate regimes.*** The life span of global monetary regimes that governed the exchange rates established between domestic fiat currencies has not exceeded 30 years in the 20<sup>th</sup> century. Following the gold standard the chaotic global financial system arising out of the inter war period ended with the establishment of the Bretton Woods system at the end of World War II. The Bretton Woods system of fixed exchange rates broke apart in 1971, although the system's main global financial institutions, IMF and World Bank continued. Now we are almost 30 years into a world monetary system relying heavily on flexible exchange rates and history suggests we may be sliding into a new system.

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<sup>1</sup> For a survey of the history of financial and monetary regimes see Caprio and Vittas (1997), Eichengreen (1998) and Cameron (1989).

***Deregulation and liberalisation.*** In the post-war years many countries used detailed controls on banks including limits on interest rates, credit limits, targets for lending to specific sectors etc. Equally most countries tried to enhance monetary autonomy using controls on cross-border capital flows. Many OECD countries still used exchange controls in crisis management mode well into the 1970s (Shafer, 1992). Yet, as world trade was liberalised and expanded, it became harder to enforce controls on capital flows. Trade liberalisation led to greater and greater leakage of capital account transactions. Likewise, banking controls came under pressure. Advances in payment technology helped undermine controls. The growing Euromarket of the 1960s undermined interest rate controls in the United States. Some countries undertook deregulation and liberalisation out of conviction as well as necessity. Most just could not resist the forces of liberalisation – a bit like with telecommunications deregulation. Today even those countries, which maintain exchange controls, are de facto fairly open to cross-border capital flows (Montiel, 1994).

### III. Outcomes and issues

What did the monetary and financial innovations of the 20<sup>th</sup> century result in?

- ***The rise of fiat money.*** For fiat money the marginal benefit from issuing money greatly exceeds the cost. Money issue leading to no more than a stable price level already provides the monetary authorities with significant monopoly rents, namely seigniorage typically amounting to some 0.4 of GDP annually in the major OECD economies (BIS, 1996). Beyond this, fiat money provides issuers with strong incentives to impose inflation tax on citizens. Unsurprisingly then, the second half of the 20<sup>th</sup> century saw historically unprecedented inflation. This was far in excess of history's greatest previous inflationary episode, the about 1 to 2 per cent annual inflation rate registered at the time of the great inflow of gold into Spain and Portugal in the 16<sup>th</sup> century (Cameron, 1989). During the current century, many countries routinely imposed inflation tax in the order of 3–4 per cent of GDP every year (Fischer, 1988). Excessive inflation either led to capital flight circumscribing the ability of monetary authorities to impose inflation tax or, alternatively, central banks were given anti-inflationary mandates. The time of the central bank ostensibly supporting economic development actively has come to an end in the 1980s. The time of central bank “independence” is there. During the 1990s, in several cases countries have given up on an independent currency altogether by choosing either a currency board or currency union.
- ***Lender of last resort and underlying micro-economic flexibility.*** Lender of last resort functions, i.e. the provision of liquidity in times of distress can be very valuable. Ideally, a lender of last resort provides liquidity to the financial system without bailing out insolvent banks or firms. The benefits of a lender of last resort have again been exemplified by the Federal Reserve's liquidity provision in the fall of 1998. The United States' monetary authority remains a large credible player in the global market for money and capital flight does not offset its actions.

However, many monetary authorities in today's world are losing the power to perform the lender of last resort function effectively, because citizens do not trust them anymore and have the option of capital flight. Legal or de facto liberalisation of cross-border

financial transactions makes the small central banks truly small players in a large world market for money, where they are just one of several partially competing issuers of money. For example, many Latin American monetary authorities appear incapable of using monetary policy to provide liquidity in tough times. Instead of reducing domestic interest rates the issue of liquidity often simply results in offsetting or even destabilising exchange rate depreciation (Hausmann et al. 1999). This loss of credibility appears to be the result of past mistakes made by central banks and their political masters. It is thus becoming clearer that an effective lender of last resort in open capital markets must either be a large player and/or very carefully maintain trust.

In addition to maintaining credibility the ability of a lender of last resort to provide lasting liquidity support depends on a sound underlying financial system. For example, the Bank of Japan experiences difficulties with providing liquidity to the economy at large despite rapid expansion of central bank credit, because micro-economic rigidities prevent workout of bad debts in banking systems. Banks consequently become unable to expand credit even when the central bank provides ample refinance facilities. Until very recently troubled banks shied away from any new lending trusting not even each others' financial position thus de facto drying up the inter bank market. A reasonably robust and flexible financial system is required to enable a lender of last resort to function. This depends on effective systems for corporate governance and bankruptcy in particular, which in turn are helped when product and factor markets more generally adjust well.

- ***Wider safety nets and bigger banking crises.*** The immediate post-war period was characterised by severe controls on banks and by minimal risk-taking. Yet, with liberalisation the last few decades have seen an increasing number of banking crises affecting some 70 countries. Crises have hit advanced countries like the United States (savings and loans crisis 1984-91) and several Scandinavian economies (in the early 1990s) as well as developing countries across all continents. Several countries have experienced repeated crises, for example Argentina, Mexico and Venezuela. The cost of bailouts has ranged between a few per cent of GDP, for example about 3 per cent in the United States and some 50 per cent of GDP in Argentina (Caprio and Klingebiel, 1996). In the United States during the savings and loan crisis, the losses per dollar of deposit were larger than during the great depression (White, 1997). Typically taxpayers have assumed a major share of the liabilities of failed banks. Recent studies suggest that the existence of deposit insurance aggravates financial crises (Demigürcü-Kunt and Detragiache, 1997). The picture is one of wider safety nets and greater deregulation succeeded by deeper banking crises.

The great number of bank failures observed in the US historically, does not invalidate the picture of rising severity of banking crises. The traditional US banking failures were rarely of systemic significance and more a function of the unit bank system, which produced tens of thousands of small undiversified and vulnerable banks. During the Great Depression, for example, large numbers of banks collapsed in the United States, but no significant bank in Canada, where banks were able to diversify their assets (Bordo, 1997).

**The overall result.** The financial and monetary innovations of the 20<sup>th</sup> century have enabled much greater sophistication in financial markets. Deeper and better functioning financial markets have stimulated economic growth (Levine, Loayza and Beck, 1998). The 20<sup>th</sup> century innovations have also provided the instruments to cushion the blow to depositors from banking crises. They have created the possibility to counteract recession and business collapse with liquidity provision by monetary authorities. Yet, the abuse of the monopoly over currency issue by many states has led to unprecedented collection of inflation tax compared to previous centuries. Powerful investors and politicians in many countries have been encouraged to expand risk-taking and self-dealing supported by various safety nets to the point that financial crises have become more frequent. The result is that more and more taxpayers throughout the world are at risk of being forced to pay several percentage points of GDP every so often to bail out the financial system and selected corporations, not to speak of funding plain corrupt practices.

#### **IV. In search of (re-) solutions**

##### ***Mainstream solution – market-oriented, independent regulation.***

The mainstream response to the current state of affairs is to enhance elements of market discipline in the financial system, to improve the independence of central banks and to strengthen regulation to control abuse, while maintaining basic systems of deposit insurance and lender of last resort. Innovative proposals include increasing capital requirements, increasing managers' and shareholders' liability, using arms-length subordinated debt to instil better monitoring for banks, requiring assets of banks benefiting from deposit insurance to be invested in high-quality paper and so on. Regulators are to become "more concerned, skilled and watchful" through better training and better institutional arrangements providing adequate incentives and political independence (Caprio and Honahan, forthcoming). Yet, the very nature of banking poses dilemmas for the mainstream approach, which may reveal it to be ineffective in many cases. To see this, consider the "dilemma of regulation."<sup>2</sup>

Deposit insurance and the lender of last resort systems are meant to prevent banking crises from leading to failure of the payment system and consequent bankruptcies of solvent but illiquid firms.<sup>3</sup> Yet, they weaken the incentives of banks and depositors to be prudent. For banks, which consequently maintain much lower levels of capital than other corporations, returns can be increased by pursuing riskier lending, while downsides are limited to some degree, particularly for those "too big to fail". Suppose bank owners have low true capital (excluding borrowed capital) amounting to, say 2 per cent of the balance sheet. It then pays them to go play single numbers roulette, where the chance of winning is 1 in 35, whereas the chance of losing their own money is only 1 in 50.

To prevent banks from engaging in reckless or corrupt lending practices and exploiting the possibilities of bailouts, prudential regulations are to be followed by banks. Bank supervisors

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<sup>2</sup> Caprio and Honahan (forthcoming) as well as Mas (1995) describe in detail the intrinsic dilemmas that arise in regulating banks.

<sup>3</sup> These are externalities of bank failures, i.e. a type of failure of pure markets to achieve optimal results.

are to monitor adherence and take action to prevent and manage crises. However, regulatory systems have very often been unable to prevent banking crises or to take prompt corrective action. This applies to sophisticated countries like the United States, to countries with a high degree of political integrity like the Scandinavian ones and to those characterised by cronyism.

The fundamental reason for failures of regulation lies in the very nature of banks. Banks specialise in assessing creditworthiness of borrowers, about which information is not widely available, for example small firms, for which it is not cost-effective to create a transparent information base that can be used by the capital markets to value the debt of such firms. Banks thus specialise in gathering and evaluation of information that is hard for others, for example depositors, to assess. Regulators stand a better chance to assess such information than small depositors do. However, even regulators face a tough time and they have worse incentives to monitor banks well than depositors or other creditors. As bank loans are not traded in liquid markets, there is no clear way of valuing them and consequently also no simple way to ascertain how much true capital banks have. The value of bank assets can change rapidly particularly where derivatives are involved. In times of crises asset quality can deteriorate very quickly. Short of managing a bank themselves, regulators will not be able to value the loans of a bank correctly. Such detailed interference would, however, undermine private owners' responsibility and render regulators responsible for the profits and losses of those they are to supervise. "Simply" assessing capital adequacy properly is already equivalent to assessing the market value of the loan portfolio.

When problems arise, owners and managers of banks have extra incentives to hide them and regulators typically face strong political pressure not to interfere. Interference exposes regulators to accusations of misjudgement with consequent large liability implications. The typical result is "regulatory forbearance" as practised most recently in Japan. In the United States it took the better part of a decade to settle the saving and loan debacle. A good mix of regulation and market discipline exercised by bank depositors and other creditors can contain financial crises (Demiguc-Kunt and Detragiache, 1997). However, politically this is very hard to achieve for most countries.

#### *Alternative solution – return to controls.*

The unavoidable difficulties of regulating banks have led some to seek refuge in the use of blunt controls. Countries like Malaysia and Russia have re-imposed exchange controls. China and India have been praised for going slow on liberalisation. Controls on foreign exchange inflows have become fashionable again. Some observers recommend relatively simple regulatory constraints that are to prevent banks from indulging in excessive risk-taking in the first place. These include ceilings on deposit rates to prevent "reckless" competition among banks and "speed limits" on the growth of bank balance sheets or loans to boom-bust sectors like real estate (Honahan and Stiglitz, 1999).

However, the forces that led countries to deregulate in the first place, in particular advances in information and telecommunication technology are strengthening, if anything. Controls are thus harder to enforce and more likely to create inefficient arbitrage opportunities. Blunt controls, administered by regulators, also risk aggravating problems of mismanagement and corruption. They can result in major wealth redistribution to the powerful classes, which

exercise control. Some recommend the use of blunt controls for countries, where weak regulatory competence renders more sophisticated regulatory approaches impractical. These are, however, precisely the countries most likely to be prone to abuse of controls, even if the controls are designed as well as possible and meant to be used only “intermittently” to prevent crisis. The abandonment of market forces places more demands on political checks and balances to keep regulators at arms-length from political pressure, while not exempting them from accountability. Incentives for regulators have to be grounded even more in their public-spiritedness. These pre-conditions for the success of controls are likely to be rare.

More fundamentally, economic growth is requiring more flexible rather than rigid financial systems. The return to control may be adopted by some countries, but may well retard their economic progress in the longer run. Modern growth theory emphasises that human intelligence is the key factor of production, which acts by recombining things (“building blocks”) that always were on earth into new useful products and services (new “building blocks”) (Romer, 1993). As the number of building blocks rises the number of potential experiments explodes.<sup>4</sup> A key challenge for successful societies is thus to maintain systems that decide, which experiments are funded, which ones are not and which ones are cut short. Central planning has clearly failed at this. Venture capital as practised in Silicon Valley would appear to embody the essence of required financial systems of the future, while blunt financial controls would seem to reduce the likelihood of continued and widespread innovation. Societies with more flexible financial markets would thus probably be more successful and evolutionary forces would continue to reduce the importance of rigid financial controls even if some governments pursue them.

***Alternative solution – market discipline without safety nets.***

Another school of thought seeks refuge in laissez faire financial systems.<sup>5</sup> The free banking systems of the past, where safety nets did not exist and money could be issued by anybody, provide the model, most prominently the Scottish free banking system (Kroszner, 1997). It lasted well over a century from the beginnings of the 18<sup>th</sup> to the middle of the 19<sup>th</sup> century. It illustrates both the disciplines on private financial institutions and the success that an economy could achieve under such a system. Banks maintained very high levels of capital, in the order of 30 per cent or more. Depositors were careful where to invest and banks advertised with detailed information about their financial strength. Bank owners were personally liable in case of bank failure. While banking crises occurred they tended to be in the nature of any other corporate bankruptcy and not produce systemic trouble. Both the Scotland of that time and the United States of the 19<sup>th</sup> century, where “wildcat” banking flourished, were the miracle economies of their time.

The problem with laissez faire proposals is, of course, the reluctance to give up some of the achievements of 20<sup>th</sup> century financial architecture, namely deposit insurance and the lender of last resort. Yet proponents of a laissez faire system argue that the functions of deposit insurance and lender of last resort can be fulfilled within the framework of market discipline.

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<sup>4</sup> In the simplest version of thinking about this, the number of permutations of building blocks indicates the number of possible experiments. Just sixteen building blocks can be arranged in over 20 trillion ways.

<sup>5</sup> A guide to libertarian views on money can be found at [www.ex.ac.uk/~Rdavies/arian/libertarian.html](http://www.ex.ac.uk/~Rdavies/arian/libertarian.html).



For example, recent studies suggest that at least some exposure of depositors to loss in case of bank runs is actually beneficial as it improves incentives to monitor banks (Baer and Klingebiel, 1995). In any case deposit insurance can be funded from premia charged to depositors. Lender of last resort systems need not be funded by central banks. They can in principle be provided by funded liquidity insurance schemes. Also, when private parties issue money, they have an incentive to provide liquidity in times of a credit crunch, because for them money is debt and during a credit crunch they can issue cheap debt to solvent but illiquid firms. There is no reason in principle, why they should be less informed or capable to achieve this than a central bank.

However, financial crises are not excluded in a free market system. When a crisis hits and hurts, governments will be under pressure to support citizens and powerful interest groups. No matter how seriously governments may prior to the crisis announce that they will not bail out anybody, in the midst of then crisis they will all too often be forced to reverse their policy stance. Time and again governments have bailed out private parties, who were not formally eligible. Private parties in turn anticipate this correctly and take excessive risk, which market forces were supposed to prevent. The inability of governments to commit themselves not to do anything beyond using pre-funded insurance schemes during a major crisis tends to render pure *laissez faire* hard to implement in today's political systems (Mas, 1995).

Even more fundamentally, a well-functioning market requires some level of trust among participants in the sanctity of contracts and property rights combined with institutions capable of sorting out disputes on these matters, reasonably well. Any market thus raises the fundamental dilemma of the economic constitution, i.e. how are sound rules established and who guards the guardians of those rules. Market forces can play an essential role as part of a system of checks and balances and lower the demands for benevolence and efficiency on the part of politicians and regulators. Interest in beneficial trade among merchants or states can provide incentives to form sensible institutions underpinning markets. However, some reasonable social institutions whether we call them government or self-regulatory bodies are required in the first place.

## **PART B: A STORY OF THE FUTURE: NATIONS STATES, E-MONEY AND CURRENCY CHOICE**

It is thus understandable, why the mainstream solution to financial sector reform may be the best we can hope for – with all its problems. But the future has a way of surprising us. The fundamental dilemma of the economic constitution, and the part of bank regulation in it, suggests that there are no unambiguous ways to predict the shape the next re-resolution of the issue will take. In the following an unconventional view of what may happen is described, closer to the *laissez faire* story, but with a twist that helps deal with the government's commitment problem.

### **I. Failure of mainstream reform**

To start with it is painfully obvious that all the good recommendations for domestic financial sector reform made by the mainstream school are seldom implemented. In the most comprehensive study of the topic the World Bank examined financial sector reforms undertaken following 64 cases of banking crises all over the world during the 1980s and 1990s. The reforms

were judged clearly successful in only 6 of those cases (Caprio and Klingebiel, 1997). 28 cases were judged partially successful and 30 were classified as failures or unresolved. Without some form of crisis, there is hardly any hope for serious reform. The reason is obvious from the preceding discussion. The sticky points in financial sector reform are about allocating gains and losses and enforcing this system. Typically influential people are affected. Thorough reform is just too hard politically in most cases, essentially because some of the bad guys may be in charge.

Arguably, the most thorough financial sector reforms were implemented in Chile and Argentina (Calomiris, 1997). Both countries did so following major crises, Chile in the early 1980s, Argentina almost a decade later. Both cases illustrate that for successful financial sector reform, crisis needs to come together with the political will and the ability to tie the hands of powerful people.

## **II. Importing credibility**

Several nations have tied the hands of powerful people and imported policy credibility from a foreign nation by establishing currency boards, for example Argentina.<sup>6</sup> Under such a system the monetary authority of Argentina, the currency board, has hardly any power left to affect domestic monetary aggregates. The money supply rises, when foreign exchange flows into the country, and falls, when there are outflows. The currency is thus fully backed by an asset, the US dollar, outside the control of the Argentine authorities. Fiat money, where the marginal benefits of printing money exceed the marginal cost and thus provide an incentive to inflate the currency, no longer exists in Argentina. Interest rates fall and rise respectively to balance demand and supply in the financial markets. Large outflows reflected in rising interest rates may precipitate a severe recession, witness the current plight of Hong Kong, which also operates a currency board.

When there are runs on banks under a strict currency board system, the monetary authorities cannot print open-ended amounts of money to support depositors. Only funded deposit insurance is feasible, possibly supported by government borrowing, but not by money creation. When funded schemes turn out to be insufficient to handle a bank run, then depositors lose their money. Estonia accepted this tough consequence of adopting a currency board in 1992.

To guard against this extreme and politically unpalatable consequence, the financial systems of countries with currency boards require tough and effective regulation and supervision of financial institutions. This includes capital requirements for financial institutions in the order of 15 to 25 per cent much higher than the current international standards and reminiscent of the capital levels of relatively unregulated free banking systems of the 18<sup>th</sup> and 19<sup>th</sup> century.

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<sup>6</sup> Other countries that have adopted currency boards during the 1990s include Bulgaria, Estonia and Lithuania. The West African countries of the CFA zone maintained their currency board-like system after a one-off devaluation against then French Franc in the mid-1990s.

Given the very tough discipline a currency board imposes, only countries that have a history of failed internal reform attempts are tempted to consider this solution. Among them only those who are honest enough to recognise their vulnerability to temptation are prepared to introduce the system. In a sense the club of currency board countries are akin to members of Alcoholics Anonymous, aware of their weakness but determined to change their future. Arguably, this also characterises the attitude of countries like Greece and Italy vis-à-vis currency union in Europe.

Not only can countries import the credibility of other monetary authorities; they can also import the strength of foreign financial institutions and to some degree the quality of foreign bank regulation and supervision. New Zealand and again Argentina are relying heavily on foreign branch banking. This shifts at least some of the burden of supervision and re-capitalisation to foreign entities allowing countries to economise on limited domestic capability. Again, it takes a special political attitude to allow foreigners to “dominate” the domestic financial system.

Quite a number of financial market observers and participants have been very surprised by governments adopting tough disciplines like those of a currency board. Ten years ago, the consensus was that a currency board was not an idea whose time had come, that it was, if anything, an outdated colonial scheme and that its time might never come back. Today analysts continue to be surprised by countries considering steps such as full dollarisation. The source of much surprise is that tying politicians’ hands reduces economically valuable flexibility and can expose a country to severe recessionary forces in case of large currency outflows.

Yet, flexibility is a double-edged sword. In countries, where elites have an interest in collecting inflation tax while being able to avoid it by way of capital flight, there is a potential citizens’ constituency for severe limits on government discretion even if it means foregoing potentially valuable flexibility. For the same reason there can be constituencies for allowing foreigners to control the financial system, because they are more likely to operate at arms-length from political forces and interest groups that are behind past excesses. The issue for the future is whether these constituencies are likely to be strengthened.

### **III. Exporting financial transactions**

The ability of capital to move across national borders and find protection from inflation tax in other countries has taken away power from monetary authorities. Many monetary authorities can no longer raise significant inflation tax.<sup>7</sup> This reduces the potential private benefits that less than benevolent political forces can extract from controlling the monopoly issue of domestic money. A monetary system without discipline will see massive capital flight and collapse. The only lasting choice is between a disciplined independent central bank that retains some flexibility with a floating currency or a currency board or currency union that imposes crude but effective discipline. Establishing sound checks and balances at home is hard for many countries. Hence the growing attraction of currency boards.

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<sup>7</sup> For the impact of e-money introduction on the ability of central banks to obtain seigniorage see BIS (1996).

The advent of low-cost, secure electronic cross-border settlement systems will broaden the scope for capital flight. For countries with limited exchange controls e-money will make capital flight an option even for poor citizens in remote areas. Where capital controls remain stringent e-money will widen the scope for evading controls for more and more people, simply because it makes transactions cheaper and allows many to be conducted abroad.

Advances in information technology also underpin the emergence of real time gross settlement systems. When payments are settled in real time and without netting out exposure, payment risk is minimised. The traditional vulnerability of the payment system is reduced and with it the risk of systemic crisis. In fact, with the advent of e-money systems it may be that banks no longer are essential for managing the payment system. Bank regulation would thus lose importance.

Today smart debit cards are being introduced in African countries to improve payment for telephone and electric services. Wireless communication devices are starting to reach millions of people in the poorest countries, for example pagers in China. Twenty-five years from now most of the world's population may well have access to global wireless communication services and to smart debit cards.

Today financial transactions are routinely conducted via remote communication systems such as the telephone or internet in a number of countries, for example Finland and the United States. Settlement costs per unit of transaction are set to decline. Swedbank estimates that the costs of transactions fall by two orders of magnitude when passing from traditional cash settlement to internet settlement.<sup>8</sup> Twenty-five years from now settlement costs may be so low that moving from one currency to another can be virtually transaction cost free for ordinary citizens – regulators willing.

Today on the internet, e-commerce and e-cash companies promote the use of electronic settlement systems. People all over the world can today buy physical products like books from e-commerce companies like Amazon.com. One e-commerce platform allows sellers of products or services to price their wares in any one of 100 currencies and promises to accept payment in any one of 16 currencies.<sup>9</sup> Twenty-five years from now anybody can shop in virtual stores, where wares denominated in multiple currencies are offered. Bills can be settled by using financial balances held in a jurisdiction of one's choice in a currency of one's choice.

And so in 2025 Raul Sosa, imaginary citizen of Recife, Brazil, will go to his corner shop to buy a glass of Maracuja juice paying the vendor in dollars and settle under Cayman Island jurisdiction. De facto, citizens can then chose to some degree which currency regime to operate in and what kind of exchange rate risk to assume. In this world, undisciplined financial systems implode quickly or do not develop. The relative strength of constituencies that favour tight disciplines on powerful people rises.

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<sup>8</sup> Swedbank presentation at Santa Fe Institute conference on March, 27 and 28 1998 in London.

<sup>9</sup> See Worldpay website at <http://www.worldpay.com.products/html>.

#### **IV. Nation states as a system of liability limitation**

The world system of nation states, combined with technology that allows cheap cross-border transactions, provides a liability limitation mechanism for financial sector policy. On the one hand nation states want to conduct exchanges with each other. On the other hand they have rather limited concern for another state's citizens and likewise for another state's elite. They are thus willing to do what it takes to maintain some level of mutually beneficial exchange, while remaining reluctant to bail out other nations and their subjects. For example, the United States cannot prevent any nation from adopting the dollar. But as has been made abundantly clear recently in response to Argentine interest in negotiating a monetary union, the United States government and the Federal Reserve are not willing to assume responsibilities of lender of last resort for foreign nations.

In this world of nation states big ideas about remaking new international financial architecture in the image of best practice at home are hard to implement. A credible international lender of last resort would need resources backed by taxpayers in rich countries far larger than those currently available to the IMF. The provision of significantly more funds would need to go together with a new system of regulatory standards for those benefiting from access to the lender of last resort and with effective cross-border supervision and enforcement of those rules. Workout and bankruptcy systems would need to function in case of cross-border disputes. Foreign lenders would need to be able to attach assets and manage them or dispose of them. Enforcement has to be effective even when those in default are politically powerful in their country and when the local judicial and law enforcement system is weak. Without such discipline, it would be imprudent to fund a huge lender of last resort system.

Nation states are not likely to write open checks for others nor are they likely to let others run parts of their judiciary and law enforcement system. Ultimately this may be a blessing in disguise, because, if the nations of the world established a single monetary and financial system, reform discipline might evaporate. The system of nation states is currently the ultimate political mechanism providing arms-length "commitment technology" that can be exploited by growing constituencies for greater discipline.

The driver for reform in the system of nation states will remain financial crises, a crude form of discipline, but bereft of regulatory forbearance. Tough banking disciplines and greater disclosure can help underpin countries' attempts to improve their reputation and avoid sudden currency crises. When they see the value of good reputation for both the sovereign and private legal entities, they may develop a taste for subjecting themselves to more independent scrutiny, for example by adhering to a club allowing cross-border supervision. The international community can support the formation of a better global financial system. BIS, IMF and World Bank, they all try to contribute by developing better standards, by spreading the word about best practice and by prodding countries in crises to adopt sound reforms.<sup>10</sup>

However, ultimately the incentive for countries to adopt better policies lies in their expectations that adoption gives them better access to financial markets and savings from

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<sup>10</sup> For a review of current initiative see IMF website at <http://www.imf.org>, particularly the reports to the G22 on the International Financial Architecture.

abroad.<sup>11</sup> It depends on whether they value such access. This very same mechanism i.e. the expectation of future access to finance has historically underpinned the evolution of credit (trust) in unregulated markets, whether in the early systems of credit in medieval Europe (Milgrom, North and Weingast, 1990 and Greif, 1997) or the loan sharking business. Government imposed discipline may enhance the mechanism, but may not function well at all without it – for all the reasons behind the “dilemma of regulation”. It thus appears that the much feared merciless discipline of international finance requires an underlying political mechanism, in this case the system of arms-length nation states, to function.

## **V. The optimal currency zone issue**

Of course, the sceptics about the brave new world of discipline with proliferating currency boards and currency unions are right. The loss of exchange rate flexibility will create serious economic adjustment problems for many countries. The fundamental issue is that many important prices, for example wages, land and house prices often do not adjust well to negative economic shocks. When a country is hit by a loss of demand for its products or a fall in their price it requires a “real” devaluation, i.e. a reduction in the prices of non-tradable items like labour and land relative to tradable goods and services like cars and food. Consider Hong Kong today. If nominal wages were more flexible downward, Hong Kong might not need such a severe recession. Countries that have flexible exchange rates can quickly lower everybody’s wages by letting the nominal exchange rate depreciate. Once the prices of non-tradables have adjusted, the country can grow again, as its products can now be produced sufficiently cheaply to find buyers again.

Will these adjustment problems thwart the process towards fewer and larger currency zones with appended currency boards? Economists have developed the concept of “optimal currency” zone. Consider Texas’ plight in 1986. The drastic drop in oil prices required a real devaluation in Texas. House prices fell, wages weakened. But Texas is part of a large country, in which citizens can and do move around freely and frequently. Rather than accepting low wages, employees could chose to move elsewhere in search of new reasonably paid jobs. Cut-of-state (“foreign”) financial institutions ended up buying up failed banks and re-capitalised them. Fiscal transfers within the United States helped cushioning the blow to Texas’ finances. The optimal currency zone concept says that currency zones will be easiest to sustain if there is substantial labour mobility and a system allowing financial flows into distressed areas to cushion the fall-out from negative shocks.

Now consider the following eight countries: Brazil, China, India, Indonesia, Mexico, Nigeria, Pakistan and Russia. About half the world’s population lives in them. None of these countries could easily be characterised as an optimal currency zone. Labour mobility in some of them is heavily restricted. The new EURO area is hardly optimal given the stark differences in economic positions of, say Ireland, the eastern parts of Germany and Sicily and the low de facto mobility of citizens across borders. If we add up the population in the eight large countries above plus currency unions such as the EURO and the West African CFA area plus currency

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<sup>11</sup> Note also that currently the IMF, for example, helps countries cope with financial market discipline, but it does not establish a fundamentally different discipline, but depends for its effectiveness on that of the financial markets.

board and dollarised countries, we find that two thirds of humanity live in sub-optimal currency areas. This assumes that the United States and Japan are such optimal zones.

Sub-optimal currency areas can obviously be sustained as long as they are embedded in a single political system or as long as the population sees them as the lesser evil compared to no discipline at all. Some improvement of the flexibility of product, labour and land markets is anyway required for an effective financial system and progress on that front will moderate problems arising in sub-optimal currency areas. Moreover, strong product and factor market competition is likely to sustain rapid productivity growth, particularly in countries catching up with world best practice. Rapid productivity growth in turn may help reduce the depth of financial crises. In fact, EMU is interpreted by some as a device forcing member governments to embark on serious product and labour market reform.

## **VI. Money Unbundled**

**Competing units of account.** Nevertheless flexibility is valuable. Yet, there may be other ways to obtain it than to preserve the national currency. The issue is to find a way of denominating wages - and other prices that adjust sluggishly to negative shocks - in a "currency" that is positively correlated with the shock. For example, there are those, who argue that Russia should have pegged its currency to the Australian dollar. As the Australian dollar reflects to some extent the commodity export dependence of Australia, Russia as another commodity producer would find a natural hedge in the Australian dollar.

The issue can be restated as follows. In doing so, it is useful to recall the three basic functions of money, namely "store of value", "means of payment" and "unit of account". The optimal currency argument sees special value in having different units of account denominate the value of goods or services which feature prices that adjust sluggishly, particularly downwards, for example wages. An adjustment in the unit of account can then effect a relative price adjustment that may be required following some shock, for example the oil price drop in the case of Texas, in a more efficient way than relying on, say, wage re-negotiations. From this perspective, all those markets would benefit from having their very own unit of account, where prices adjust badly. The ideal world thus has different units of account. As different shocks tend to hit different sectors of activity within a country, ideally, it would be possible to denominate prices in specific currencies suited to a specific economic activity. The use of different units of account may be an acceptable way for everybody to fool themselves into nominal and real price flexibility, just as adjustable nominal exchange rates are.

This is possible in principle. After all, money is debt of a central bank.<sup>12</sup> One could use debt of other entities to denominate the wages of employees in a particular industry, for example that of highly rated corporations, which tend to be better rated than most monetary authorities of this world anyway. For any specific industry one could also create a mutual fund that holds a representative basket of debt issued by well-rated corporations operating in the industry. The

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<sup>12</sup> Domestic currency is truly like central bank debt, where currency is fully backed by "serious" assets, like strong foreign currencies or gold.

fund could then in turn issue bonds, the value of which adjusts with industry conditions. Employees could be paid wages, the value of which fluctuates with the value of these bonds.

Why would any self-respecting employee agree to such a scheme? In the past the very issue of varying the currency, in which wages are denominated, has not arisen very often except maybe in compensation and retirement packages for expatriate employees of multinational organisations. In the future, it is more likely to be a topic of debate (see the U.K. example discussed below). Once it is a topic for debate, it will become clear that currency choice has some risk-sharing properties, which are after all of potential interest to both employers and employees. First, today more and more firms pay all sorts of employees with shares or stock options. The risks of being paid wages denominated in “industry bonds” are less than with such firm-specific remuneration. Second, the employee thus paid is exposed to currency risk, i.e. the exchange rate of the bond to the currency used as unit of account for purchases of goods and services. However, that currency risk is offset to some degree by a lower risk of becoming unemployed for those who accept wages that move with industry profitability. Lower risk of unemployment may make both the employee and the firm a better credit risk to lenders. Depending on individual preferences people might prefer to have their salaries denominated in varying proportions in shares, bonds and “regular” currency.

The principle is illustrated by a current debate in the United Kingdom. As of this year U.K. companies have the option to keep their accounts in EURO, be taxed on those accounts, pay taxes in EUROS and conduct financial operations in EUROS. Some large U.K. companies are currently considering whether to pay certain classes of employees in EUROS. Some trade unions are said to favour this. Payment in EUROS would make it easier for employees to get EURO denominated long-term mortgages, which are currently still cheaper than the typical floating rate mortgage in the U.K. The switch to EUROS would thus *de facto* act in the first round like a salary increase for many employees. Choosing a different currency makes the employee a better credit risk for some purposes and may be the preferred option.

The basic principle is also very much at work in today’s Russia, where barter is widely used for wholesale transactions. In recent years in Russia, credit constraints on banks have dried up trade credit for many firms. Barter is substituting for normal trade credit issued by banks. Essentially, a supplier paid in goods extends credit to the buyer, because it takes time to sell the goods and obtain money. For the period it takes to do so the supplier actually extends a type of credit. Alternatively firms could pay suppliers with IOUs. However, their value is hard to assess, whereas barter goods provide better credit backing and by now fairly well functioning barter exchanges have formed that provide the market with essential liquidity (Commander and Mumssen, 1999). In addition, accounting rules imposed by the tax authorities on companies limit the freedom of companies to adjust prices denominated in roubles downward, ostensibly to prevent tax evasion. However, many goods produced in markets with weak demand require price discounting to establish a reasonable balance between demand and supply. Denominating prices in goods provides a more flexible unit of account than the rouble to effect downward price adjustment (Oxford Analytica, 1998).

In sum, advocates of optimal currency zones and thus flexible exchange rate regimes *de facto* assume that multiple units of account are desirable. There is no reason to believe that currencies defined on the basis of national boundaries are the optimal competing units of



account. Units of account, tailored to reflect varying conditions even within countries, can potentially improve on national ones. For example if workers in the manufacturing industries of the British Midlands can only with great difficulty find jobs in London's service industry, then workers in those two labour markets would benefit from different units of account. Through the rise of cross-border e-commerce we also have to face the issue of how to denominate products offered in this way. If, for example, certain types of items sold by one e-commerce provider tend to be preferred by certain types of customer classes it may provide competitive advantage to the seller to (partially) denominate their value in a "currency" reflecting those that are used to pay the typical customer. The advocates of optimal currency zones should really add free choice of the unit of account to their desired policy goals. In line with standard economic arguments, greater choice should, if anything, improve outcomes.

***Competing means of payment.*** Wages could thus be usefully denominated using special units of account, which are positively correlated with industry conditions. However, employees may actually be paid in more liquid instruments. Current exchange rates would then be used to establish the amount of those liquid means of payment required to meet contractually agreed wages. Such features of contracts separating the unit of account from the means of payments for wages or pensions can today be found in expatriate remuneration packages. Some e-commerce providers allow customers a choice of currencies to be used for payment. Today some stores in London accept payment in up to eleven currencies.

It is obvious why people would prefer another currency to their national one in many countries. After all the use of the dollar, in particular, is widespread in many high-inflation countries, where citizens do not trust national monetary authorities. In fact, most monetary authorities of the world have a lower credit rating than many strong international corporations and citizens of those countries would surely prefer to use the debt of these corporations as money to their own currency. However, as long as strong fiat currencies such as the US dollar exist, the obvious choice is to stick with them.

People's preferences could really turn towards private money, if the credibility of the US Fed and the European Central Bank was undermined. This would reduce trust in the world's two most prestigious currencies and it would signal strongly that even the safest havens might be vulnerable. In the past, citizens started switching out of the domestic currency in major ways when inflation reached triple or high double-digit levels. With very low costs of cross-border settlements and sophisticated financial markets handling a variety of units of account capital flight may become effective at much lower levels, say 10 per cent inflation or below. One could, for example, imagine that the US Federal Reserve would be tempted to support US equity investors repeatedly after stock market crashes as it did in 1987. In time this could drive stock market speculation to ever increasing heights, as investors expect to be helped by the Fed and the Fed can not refuse to help ageing populations dependent on stock market performance for their retirement. The European Central Bank may yet succumb to pressures to inflate as European unemployment continues to rise. We might thus imagine that in Europe people might lose trust in the new currency at the same time that they start using new units of account to improve real wage flexibility.

In the light of these possibilities, competing issuers of money (as means of payment) provide citizens with valuable choice to insure themselves against inflation tax via capital flight.

As even currently prudent and competent monetary authorities may at some point fall prey to the incentive to issue excessive amounts of currency, it will always be good to have a number of strong currencies around.

Citizens may then come to trust those currencies most that are backed by safe and liquid assets, for example gold, oil or highly rated bonds of governments or corporations. The issuer of money backed in this way may well be a private party as has been the case in the free banking systems of past days (or Russian Veksels in the 1990s). In a world of e-money a particular challenge for private issuers may be how to establish trust in their currency. In the past holders of currency could take comfort in banks with big marble buildings that could not disappear over night. Big buildings, i.e. significant sunk costs, de facto acted as a commitment mechanism for bank owners. In the future, maybe mining and oil companies could become credible issuers. In a sense, in the “weightless” economy issuers of money may need to be asset-based to establish credibility.

The use of competing currencies as a means of payment has several historical examples in times when payment technology was much more primitive. In the 19<sup>th</sup> century United States store clerks had large books providing guidance on which paper issued by competing banks to accept and on the relevant discount. With electronic payment systems it will be even easier to assess the value of a “currency” offered in payment, for example in real time at the store counter.

The functions of money, unit of account, means of payment and store of value can thus be completely unbundled. We can already use a vast array of assets to store value (stocks, bonds, real estate, bank accounts, gold, antiques etc.). For the choice of store of value, return, risk and diversification expectations guide the investor. For the choice of unit of account trade-offs between credit and exchange rate risk may guide contract design. For the means of payment liquidity considerations are key.

## **VII. Conclusion**

*The financial system in 2025.* The scenario presented above assumes that current efforts to find a globally agreed framework for financial markets fail. Likewise efforts to render monetary authorities independent are assumed to fail over longer periods of time. Meanwhile the advent of low cost financial transaction technology effectively erases limits to trade in financial instruments of whatever denomination. As individuals, corporations and nations try to grapple with the consequences we may start to see the emergence of a new global financial system.

By 2025 key elements of the new system may already be in place. In a number of countries, where monetary discipline was too hard to introduce and where citizens took more and more advantage of their capital flight option, currency systems have imploded. In some of these countries governments turned to formal commitment mechanisms like currency boards or unions.<sup>13</sup> In others, citizens routinely use “foreign” currencies to settle transactions. The spread

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<sup>13</sup> Both in currency unions and among “dollarised” zones balance of payments statistics become of less use. As in Hong Kong today, full balance of payments statistics may no longer be produced and thus may not form the basis of macro-economic policy-making anymore.

of new units of accounts to denominate non-tradables, wage contracts in particular, has largely eliminated the pain from removing exchange rate flexibility. Only a few small countries still have the credibility to retain strong domestic currencies and flexible exchange rate systems.

The EURO has lost credibility as the ECB gave in to political pressure to accommodate uneven economic development in the European Union. The EURO is used less and less to denominate contracts. Alternative means of payments, e.g. the dollar are circulating. While the dollar is still considered trustworthy, the experience with the EURO has made people wary. Cross-currency transaction costs have plummeted. People have become used not only to store their wealth in a multitude of assets but also to complex ways of denominating contracts. They thus find it comparatively easy to use varying means of payments to settle transactions. Some commodity-backed currencies are being used that also find favour with investors and as units of account.

The first central bank was already privatised by the radical government of a successful Central Asian republic in 2008. A wave of such privatisations started around 2015.<sup>14</sup> At the same time governments have reshaped financial systems. Funded schemes to provide the functions of lender of last resort and deposit insurance have been put in place – often backed by the fiscal authorities.

***Policy debate in 2025.*** Regardless of whether one thinks that a world of currency competition as described above is good or bad, governments may well be faced with a significantly changed environment for policy-making. And so it may be that in 2025 the biggest topic of debate among monetary policy-makers on the globe is that of the consequences of currency choice for citizens.

In that debate there are two underlying questions.

- How will the services of lender of last resort be provided in a world of currency competition?
- Will this world not be subject to very high financial volatility and frequent crises as demand for money is subject to self-fulfilling panics triggered by firms and people becoming dissatisfied with the currency they currently use?

Advocates of currency competition will argue that private issuers of money have a good incentive to preserve discipline, i.e. not print money in good times, because people will desert their currency, if they print excessive amounts. During times of liquidity shortage, they will have an incentive to issue more debt (money) at low rates advantageous to them. They will also point out that people can always opt for one of the great currency blocks, which have clear old-style lenders of last resort.

Sceptics will, of course, recognise this type of world as Friedrich Hayek dreamland, where ultra-liberal fantasies come true that will in practice result in recurring financial turmoil. They will argue that money demand for competing currencies will be highly unstable and thus

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<sup>14</sup> In many countries central banks may have given up targeting inflation rates, because the split between real and nominal price changes can not be measured well enough in an economy, where quality changes and new products render calculating inflation indices more and more meaningless.

price levels subject to significant fluctuations. Such systems may be subject to frequent and severe speculative attacks. Rogue private money issuers may try to take advantage of trusting citizens, who will have a hard time assessing the seriousness of private issuers. The sceptics will reply that well-regulated large monetary systems with lenders of last resort are superior because they have the option of calming panics and supporting depositors with open-ended deposit insurance.

To which the advocates of competition will reply that in the absence of safety nets citizens will monitor financial institutions better. Those who want to get business will have to advertise with verifiable details about their financial strength, just as Scottish banks in the early 19<sup>th</sup> century. Funded deposit insurance and lenders of last resort are still possible, just not the dangerous open-ended money printing machines of the 20<sup>th</sup> century. Market discipline would drive out weaknesses and leave very robust financial institutions and currencies.

And so we are back at the beginning. Some trust the self-correcting forces of markets, some fear panic and speculators. Some things never change. But incentives to fix domestic financial systems may well grow. Either regulatory systems get better or some degree of greater currency choice in global financial markets will establish crude but ultimately effective discipline. The eternal tug-of-war between markets and regulators goes on - unsurprising to students of politics. They understand that the dilemma of how to design systems that guard the guardians, while providing flexibility, has no easy solutions.

Students of history will remember that the great leap forward to innovative modern societies, the "European Miracle" (Jones, 1981), arose in the context of squabbling states and principalities in medieval Europe, which gave choice to more and more citizens precisely because they were not "well ordered". Key to the secret of success were the natural checks and balances arising from the combination of arms-length entities and sufficient permeability of borders for ideas, people, trade and finance. A world of nation states with borders open to financial movements and currency choice might after all be well suited to support continued social and technical innovation on earth, which in turn renders development more sustainable. In the year 2025 as depicted in this essay, there is much debate about the costs and benefits of competition among jurisdictions, be they nation states or other types, such as cities.

## BIBLIOGRAPHY

- H. Baer and D. Klingebiel (1995) "Systemic risk when depositors bear losses" in *Financial Services Private and Public Policy*, Vol. 7
- Bank for International Settlements (BIS) (1996) "Implications for Central Banks of the Development of Electronic Money", Basle, October
- M.Bordo (1997) "Regulation and bank stability: Canada and the United States, 1870-1980" in G. Caprio and D.Vittas "Reforming Financial Systems", Cambridge University Press
- C. W. Calomiris (1997) "The Post-modern Bank Safety Net", American Enterprise Institute, Washington D.C.
- R. Cameron (1989) "Concise Economic History of the World" Oxford University Press
- G.Caprio and P. Honahan (forthcoming) "Beyond Capital Ideals: Restoring Banking Stability", *Journal of Economic Perspectives*
- G. Caprio and D. Klingebiel (1996) "Bank Insolvencies – Cross-Country Experience" World Bank Policy Research Working Paper 1620, July
- G. Caprio and D. Klingebiel (1997) "Bank Insolvency: Bad Luck, Bad Policy or Bad Banking" in M. Bruno and B. Pleskovic (ed.) "Annual World Bank Conference on Development Economics 1996", Washington D.C.
- G. Caprio and D.Vittas (1997) "Reforming Financial Systems", Cambridge University Press
- S. Commander and C. Mumssen (1999) "Understanding barter in Russia", European Bank for Reconstruction and Development , Working Paper 37, London, January
- A. Demigurc-Kunt and E. Detragiache (1997) "The Determinants of Banking Crises: Evidence from Developed and Developing Countries" World Bank, mimeo July
- M. Dewatripont and J. Tirole (1994) "The Prudential Regulation of Banks", Cambridge, MIT Press.
- B. Eichengreen (1998) "Globalising Capital: A History of the International Monetary System" Princeton University Press.
- C. England (1997) "The Future of Currency Competition" in J.A. Dorn (ed.) "The Future of Money in the Information Age" Cato Institute, Washington D.C.
- S. Fischer (1999) "On the Need for an International Lender of Last Resort", Paper presented at the Annual Meetings of the American Economic Association, January.
- S. Fischer (1988) "Devaluation and Inflation" in R. Dornbusch and F. Helmers (ed.) "The Open Economy: Tools for Policymakers in Developing Countries" Oxford University Press.
- A. Greif (1997) "Contracting, Enforcement and Efficiency: Economics beyond the Law" in M. Bruno and B. Pleskovic (ed.) "Annual World Bank Conference on Development Economics 1996", Washington D.C.

- R. Hausmann, M. Gavin, C. Pages-Serra and E. Stein (1999) "Financial turmoil and the choice of exchange rate regime", Inter-American Development Bank, Washington D.C.
- P.Honahan and J. Stiglitz (1999) "Robust Financial Restraint" World Bank, mimeo.
- International Monetary Fund (IMF) (1997) "Capital Flows to Emerging Markets – A Historical Perspective" in IMF, "International Capital Markets" Washington D.C.
- International Monetary Fund (IMF) (1998) "Summary of Reports on the International Financial Architecture", Washington D.C. October.
- E. Jones (1981) "The European Miracle: Environment, Economies and Geopolitics in the History of Europe and Asia", Cambridge, Cambridge University Press.
- R.S. Kroszner (1997) "Free Banking: The Scottish experience as a model for emerging economies" in G. Caprio and D.Vittas "Reforming Financial Systems", Cambridge University Press.
- R. Levine, N. Loayza and T. Beck (1998) "Financial Intermediation and Growth: Causality and Causes" World Bank, mimeo.
- I. Mas (1995) "En Pos de la Estabilidad Bancaria: Fatalismo Regulatorio y Subordinacion Macroeconomica" University of Chicago, mimeo, December.
- I.Mas (1996) "The many faces of money: accounting for the central bank", University of Chicago, mimeo, April.
- P.R. Milgrom, D.C. North, B.R. Weingast (1990) "The Role of Institutions in the Revival of Trade: The Law Merchant, Private Judges, and the Champagne Fairs" in *Economics & Politics* 2(1).
- P. Montiel (1994) "Capital Mobility in Developing Countries: Some Measurement Issues and Empirical Estimates" in *The World Bank Economic Review* Vol.8, No.3 September.
- Oxford Analytica (1998) "Russia: Non-Monetary Exchange", August 27.
- P. Romer (1993) "Ideas and Things" in *The Economist*, September 11-17.
- J.R. Shafer (1992) "Experience with Controls on International Capital Movements in OECD Countries – Solution or Problem for Monetary Policy?" OECD, Paris, mimeo.
- E. White (1997) "Deposit Insurance" in G. Caprio and D.Vittas "Reforming Financial Systems", Cambridge University Press.

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